<b>Work Orde</b> <i>July-23-13 12:5</i>		)4944	012-113	*104	1944*						Page 1
Item ID: Revision ID: Item Name:	D2012-113	0 2 B	012-113	Accept	*N900	040	100	<b>)*</b>	Setup Star Stop	1 /1	S1* S2*
Start Date: Required Date: Reference:	7/23/13	Start Qty: 20.00 Req'd Qty: 20.00	, , ,		Cust Item 1 Customer:	ID:				I	. 1/
Approvals:	Process Pla	an: MUJ	Date: 12-07-75			ate:		F	Run Star Stop	1/1	R1* R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Rev	vision Nbr									
D2012-113	Rev	v C									
*100  *100* Waterjet  FLOW CNC Waterj	et.	FLOW WATER JET  Memo	per Dwg D2012-113	0.00				20	ပ		Ae 13.09.09
TEOW CIVE Watery	ci	Dwg Rev Prog Rev	: <u> </u>								
110	ī	QC2- Inspect parts off	machine FAI/FAIB	0.00							
*110* QC Quality Control		Memo		0.00				<i>2</i> 0	<u>o</u>		13.09.0
·											
*120 *120*		QC8- Inspect parts - so	econd check	0.00 <b>DAS</b> 227 228				50			
QC		Memo		0.00	$\sim$ 1						

Quality Control

NCR:	es /	No No				<b>WORK ORDER NON-</b>	COI	<b>NFORM</b>	MANCE / UPDATE					
								,	•		QA Closed:	Dat	e:	
Work Orde	eř:					DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Part No						Scrap Machining Sn Use-as-is Thermoforming Fi				sstube Water Jet Engineerin all Fab Prod. Eng. Coor. Qualit nishing Rec/Store/Packaging Othe posite Supplier				
Root					Descri	ption of work order update	$\top$	nitial	Action		Sign &			
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector	
Doc/Data									***					
Equip/Tooling								-						
Operator		Į												
Material														
Setup														
Other														
Process	Ш													
Supplier														
Training		l		ļ										
Unapproved				<u> </u>	<u> </u>									
						<del></del>	AUL	T CATE	GORY					
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		ending			-	Bend	-	Grain		-	Ovalized		Pressure/Forced	
	$\vdash$	entre No	t Concei	ntric to	o/s  -	BOM/Route	-	Hardwa		$\vdash$	Over/Under		Temperature/Cure	
;	—	racks			-  -	Broken/Damaged	-	4	on incomplete	-	Part Incorred	)-	Weld	
	—	rushed/0	rimped		<u> </u>	Burrs	$\vdash$	-	ions Incomplete/Unclear	$\vdash$	Part Lost/Mi Part Moved	ssing [	Wrong Stock Pulled	
	$\vdash$	uffs			<u> </u>	Contamination	$\vdash$	Mainte		-	4	V/rana		
	$\vdash$	eat Trea		Tuba	<u> </u>	Countersink Cut Too Short	$\vdash$	Mislabe Misread		$\vdash$	Positioned V Power Loss/		Other	
		ispection	-	iube	<u> </u>	Drill Holes	-	Offset	ı		Irowel ross/	onike [	Other	
	—	ipples in orque W		Evtrucia	<u> </u>	Drawing	$\vdash$	4	Calibration			<u> </u>		
	⊢-	orque vv urning Se			''	Finish	$\vdash$	4	Sequence					
1	1 I''	arrining St	quence		1	I musii	- 1	Tour or s	requerice .					

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

Folio.

<b>Work Orde</b> <i>July-23-13 12:5</i>		4944		Page 2						
Revision ID: Item Name:	D2012-113 Clamp 7/23/13	Start Qty: 20.00	*20*	Accept	*N900040	1100*	Setup	Start Stop	*NS1* *NS2*	
Required Date: Reference:	7/23/13	Req'd Qty: 20.00	*20*		Customer:		_	G		
Approvals:		n:	Date:	Tooling: SPC (Y/N):	Date:		Run	Start Stop	*NR1* *NR2*	
Sequence ID/ Work Center II	)	Operation Description		Set Up/ Run Hours	Tool ID Tool #	Plan Acce Code Qty	pt Rej Qty		Reject Insp. Number Stamp	_
*130* Small Fab		Small Fab  Memo		0.00		_10	2	<u> </u>	71 	g-2
Small Fab		2- Bend as pe	y rough edges er Dwg D2012-113 using E	DT8458		- 20	H	* 713.0	996	
140 *140* OC		QC5- Inspect part comple	teness to step on W/O	0.00 DAS 27 0.00 3 089	<u> </u>	20	)			
Quality Control		Мето		0.00 10 17 81	·					
150 *4.5.0*		Identify as per dwg & Sto	ck Location: Sto63	0.00		2	O		20013	_, <b>9</b> -1
*150* Packaging		Memo		0.00			<del>-</del>			

Packaging

											DQA:	Date	:
NCR:	Yes	/ No				WORK ORDER NON-O	COI	NFORM	AANCE / UP	DATE		D-1-	
									<u> </u>		QA Closed:	Date	:
Work Orde	or.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N	- No				<del></del>	Rework Scrap Use-as-is Work Order Update			Skid-tube Crosstube  Machining Small Fab  Thermoforming Finishing  Large Fab Composite		Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier		Engineering Quality Other
NCKI	NO					Work Order Opdate	ן נ		Laige rab	composite	1	3upplier	
Root					Descri	ption of work order update		nitial	Ac	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data								·					
Equip/Tooling													·
Operator													
Material													}
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Other			1										
Process													1
Supplier													
Training													
Unapproved			<u> </u>					199					
						F	AUL	T CATE	GORY				
Landi	ng G	ìear			_	General	_				<b>-</b>		<b>¬</b>
	Щ	Bending				Bend		Grain			Ovalized	_	Pressure/Forced
	Ш	Centre No	ot Concei	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	<del> </del>	Temperature/Cure
	Ш	Cracks				Broken/Damaged		Inspecti	on incomplete		Part Incorred	<b>├</b>	Weld
	Ш	Crushed/	Crimped			Burrs		Instruct	ions Incomplete/	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part Moved		
		Heat Trea	at			Countersink		Mislabe	led		Positioned V		<b>-</b>
	=	Inspectio	n Strip in	Tube		Cut Too Short		Misread	l		Power Loss/	Surge	Other
		Ripples in	Bend			Drill Holes		Offset					
		Torque W	/aves in E	xtrusio	n 🗍	Drawing		Out of 0	Calibration				_

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde July-23-13 12:5				*104				Page 3			
Item ID: Revision ID: Item Name:	D2012-1 Clamp	13		Accept	*N900	<u>040</u>	100	)* s	Setup Sta	1/1	S1* S2*
Start Date: Required Date: Reference:	7/23/13 7/23/13	Start Qty: 20.00 Req'd Qty: 20.00	*20* *20*		Cust Item I Customer:	D:					
Approvals:	Process QC:	Plan:	Date:	Tooling: SPC (Y/N):		ate:		F	Run Sta Sto	1/1	R1* R2*
Sequence ID/ Work Center II	)	Operation Description QC21- Final Inspection -	Work Order Release	Set Up/ Run Hours 0.00	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
*160* QC Quality Control		Мето		0.00				-9	\$1 PC	13-09	30

of poor

											DQA.	Date	·· _	
NCR: Y	es/	/ No				WORK ORDER NON-C	WORK ORDER NON-CONFORMANCE / UPDATE						- e:	
Marie Orde						DISPOSITION			AGAINST	PROCESS				
Work Orde	- 1					Rework	ıl		Skid-tube Crosstube	Г	1	Water Jet	٦	Engineering
Part N	lo.					Scrap	1 1		Machining Small Fab		Pro	d. Eng. Coor.	1	Quality
	-					Use-as-is			noforming Finishing	-	=	e/Packaging	1	Other
NCR N	۱o	_				Work Order Update	]		Large Fab Composite			Supplier		
				·				L			T		_	
Root						iption of work order update	1	nitial	Action		Sign &		-	
Cause	$\dashv$	Date	Step	Qty		or Non-conformance	Ch	ief Eng	Description		Date	Verification	4	QC Inspector
Doc/Data														
Equip/Tooling									,					
Operator														
Material											1			
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Other				1										
Process														
Supplier									•					
Training													ĺ	
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						F.	AUL	T CATE	GORY					
Landi	ng G	ear				General		_			_			
	$\bigcap$	Bending				Bend		Grain			Ovalized		_ F	Pressure/Forced
		Centre No	ot Concei	ntric to	o/s	BOM/Route		Hardwa	re	L	Over/Under	tolerance	_]1	Temperature/Cure
	$\Box$	Cracks				Broken/Damaged		Inspect	on Incomplete		Part Incorred	it	ال	Weld
		Crushed/	Crimned			Rurrs		Instruct	ions Incomplete/Unclear		Part Lost/Mi	ssing	٦	Wrong Stock Pulled

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

Part Moved

Positioned Wrong

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Cuffs

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

**Picklist Print** 

July-23-13 12:57:21 PM

Work Order ID:

104944

Parent Item:

D2012-113

Parent Item Name:

Clamp

**Start Date:** 7/23/13

Required Date: 7/23/13

Page 1

**Start Qty: 20.00** 

Required Qty: 20.00

Comments:

IPP: F01.10.05Fixed Typo and Added Inspection Level 21SM IPP Rev:G Now on Waterjet 07-03-28 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA 304/316 Sheet .063		Purchased	No	and the state of t		110	sf	373.0102	0.015	6.31579		Ae_1	3,09.
				<b>Location</b>		Loc Oty	Lo	c Code					
				MAT020		373.0101686							
				122	245	0.1713688							
				123	136	140.8							
				124	428	23.61							
				125	599	5.410631							
				M1	26159	203.018169							

126915 -> 1316

											DQA:	Date:	
NCR:	⁄es	/ No				WORK ORDER NON-C	ON	NFORM	MANCE / UPDA		QA Closed:	Date:	
Manda Onda						DISPOSITION				PROCESS			
Work Orde	_					Rework			<b>├</b> ──	Crosstube		Water Jet	Engineering
Part N	۱o					Scrap Use-as-is			Machining noforming	Small Fab Finishing		d. Eng. Coor e/Packaging	Quality Other
NCR N	NCR No.					Work Order Update			~ <del></del>	Composite		Supplier	
Root					Descri	iption of work order update	ı	nitial	Action	1	Sign &		
Cause		Date	Step	Qty	,	or Non-conformance	Ch	ief Eng	Descript	ion	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator			:										
Material							1						
Setup													
Other													
Process													
Supplier	f	•			7 * .		ł						
Training													
Unapproved													
						F/	AUL	T CATE	GORY				
Landi	ng G	ear				General		•		•		<b></b>	•
		Bending				Bend		Grain		<u></u>	Ovalized		Pressure/Forced
1		Centre No	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorred	t	Weld
		Crushed/	Crimped			Burrs		Instruct	ions Incomplete/Unc	lear	Part Lost/Mi	ssing	Wrong Stock Pulled
					Contamination		Mainte	nance		Part Moved			

Mislabeled Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Positioned Wrong

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Countersink

Cut Too Short Drill Holes

Drawing

Finish

Folio

DART AEROSPACE LTD	Work Order:	104944
Description: Clamp	Part Number:	D2012-113
Inspection Dwg: D2012-113 Rev: C		Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

				<del></del>		
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.75	+/-0.030	.75	_		V	Jkm - 01
0.40	+/-0.030	,40	-		٧	
1.360	+/-0.010	1.360	_		v	
0.800	+/-0.010	, 800	-		V	·
Ø0.257	+0.006/-0.001	.256	-		V	
Ø0.191	+0.005/-0.001	.190	_		v	
2.96	+/-0.030	2.95	<u>-</u>		V	
0.063	+/-0.010	.58			V	
						71 Part 2 Parts 1-2
<b>1</b> 9.19.						
			2AC			

Measured by: Ae
Date: 13,09.23

Audited by: 89
Date: B. Q. Q. Y

Date: N/A

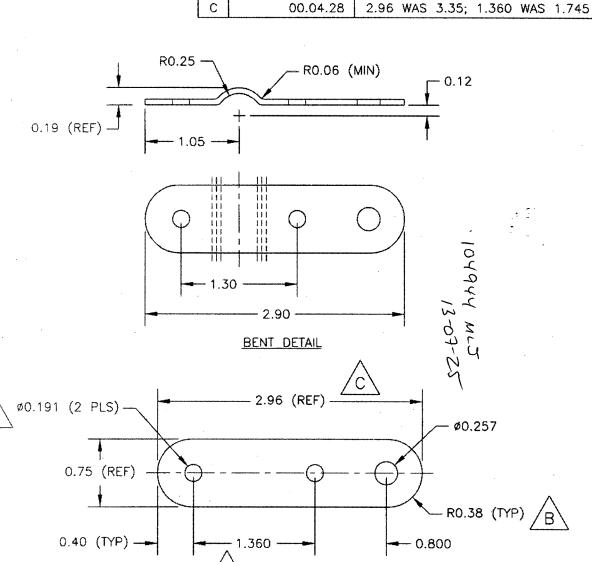
Rev Dat	e Change	Revised by Approvéd
A 07.05	.08 New Issue	KJ/JLM 🛠 🦨





	DESIG	JB	DRAWN BY	DART AEROSPACE LT HAWKESBURY, ONTARIO, CANADA	D
2)	CHECK	(ED	APPROVED	D2012—113 SH	REV. C
1		YA		· · · · · · · · · · · · · · · · ·	EET 1 OF 1
ı	DATE			TITLE	SCALE
	00.0	4.28		CLAMP	1:1
	Α		92.06.03	REDRAWN FROM D2012	
	В		00.02.23	REDRAWN; RO.38 WAS RO.50; ØO WAS ØO.189; ADDED FLAT PATTER	.191 RN
ı					





MATERIAL: AISI 304/316 SS, 0.063 THICK TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES

FLAT PATTERN

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